This document contains the front material from the document Dredged Material and State Coastal Management Programs: Lessons Learned from a Workshop in New Orleans, Louisiana in January 1999, EPA-842-S-99-001

Dredged Material Management and State Coastal Management Programs

January 1999

An Introduction to the Issues

Foreword

The National Dredging Team, the National Oceanic and Atmospheric Administration's (NOAA) Office of Ocean and Coastal Resource Management, and the Coastal States Organization sponsored a workshop in New Orleans on the often troubled intersection of federal navigation dredging projects and state coastal management programs. We started with two modest goals: to clarify dredging and coastal management requirements, and to stimulate better communication among federal, state, and local agencies on these issues.

The workshop exceeded our expectations. The participants proposed an abundance of recommendations for improving intergovernmental processes related to dredged material management in the coastal zone. The attitude and spirit of cooperation evident during the workshop suggests that real progress can be made within existing constraints.

We thank all of the participating federal and state agencies for sending their representatives and assisting in the planning and preparations for the workshop. NOAAs Office of Ocean and Coastal Resource Management and the Coastal States Organization were instrumental in securing the participation of state coastal management programs and deserve special thanks. We also thank the American Association of Port Authorities and the representatives of ports from around the country that participated in the workshop. Staff members of the National Academy of Public Administration's Center for the Economy and Environment facilitated the workshop and prepared this report. We thank the Academy for its assistance and good work.

While the workshop itself was a great success, the optimism of those three days will soon dissipate if the participants' agencies do not commit themselves to the daily work needed to reach our common objectives. Two types of follow-up are particularly required. At a local and regional level, all concerned parties must continue their efforts to improve interagency coordination and develop long-term planning processes. Second, the federal agencies must work to ensure that the national programs are harmonized and that appropriate guidance and policies are developed for implementation at local and regional levels.

In support of this second follow-up action, the National Dredging Team will formulate an action plan that extracts key recommendations from the workshop and specifies how the various agencies in the federal government can make improvements in this important area.

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Executive Summary

This report summarizes the discussions and recommendations developed at a workshop on dredged material management and state coastal management programs held in New Orleans, Louisiana, on January 20, 21, and 22, 1999. The workshop was jointly sponsored by the National Dredging Team, the

Office of Ocean and Coastal Resource Management of the National Oceanic and Atmospheric Administration, and the Coastal States Organization. The National Academy of Public Administration facilitated the workshop and prepared this report.

The workshop was designed to elucidate the difficulties in using dredged material for beneficial purposes, and to stimulate thinking about creative ways to resolve those difficulties. To a great extent, the federal, state, and nongovernmental participants at the workshop agreed that it is desirable to use dredged material to restore wetlands or other natural resources. The challenge is to coordinate state and federal processes to accomplish those beneficial uses within the existing financial and legal constraints. The workshop participants' suggestions and recommendations can be collected into four categories:

- There was a widely held sentiment that the regulatory relationship between the U.S. Army Corps of Engineers and the state coastal management programs can be improved through incremental steps. Improved clarity about goals and greater transparency in the decisionmaking process can reduce the conflicts between the Corps and state and local organizations.
- In many cases, the beneficial use of dredged-material costs more than traditional "dredge and dump" practices. Proponents of beneficial uses need to get involved in the Corps' planning activities earlier, make better use of existing cost-sharing mechanisms, and identify additional project sponsors and additional funding mechanisms. Beneficial uses benefit coastal communities and the nation as a whole, and need funding support from a broader section of the population than navigation interests alone.

Sponsoring Agencies

- The planning process and the procedures for state and federal coordination can be improved in many ways. Earlier project planning, regular meetings between state and federal agency representatives, broader public participation, and longer-range planning will contribute to better project implementation and funding.
- Better scientific understanding and greater public education about the beneficial uses of dredged material are necessary to make better decisions and to garner support for further expansion of these programs.

Setting the Scene

An Introduction to the Issues

Dredging is critical to maritime trade and many recreational pursuits. Harbors and channels grow more shallow with the deposition of sediment from rivers and tributaries. This sediment must be removed periodically to maintain the depth of the harbor. Waterways are also dredged to deepen shipping channels and construct new harbor facilities, and to clean up contaminated sediments.

For much of the nation's history, the dredged material was regarded as a waste, a view that was reflected in the historic term "dredging spoils." In recent years, dredged material has come to be regarded as a resource that can be reused to advance other economic and environmental goals. Examples of beneficial uses of dredged material include using the material for beach replenishment, wetlands creation and replenishment, construction of waterside recreational facilities and parks, construction of shoreline protection projects, as raw material for landside construction projects, and in the manufacture of topsoil.

The Role of the Federal Government

Keeping navigation channels clear has long been regarded as a federal interest. The U.S. Army Corps of Engineers performs the largest portion of dredging in U.S. waterways, either using its own dredges or through private contractors. The Corps is responsible for maintaining 25,000 miles of federal navigation channels. The Corps also issues permits for dredging to private and public organizations, such as port authorities, marinas, and private companies with industrial harbors. The Corps dredges about 300 million cubic yards of material from U.S. waterways each year, and private parties dredge about 100 million cubic yards more.

The Corps of Engineers' involvement in dredging activities is rooted in a century of federal legislation. The Rivers and Harbors Act of 1890 provided the Corps with the authority to maintain navigable waterways. Section 404 of the Clean Water Act of 1972 gave the Corps the power to regulate discharges of dredged materials into waters of the United States. The third major legislative foundation for the Corps' dredging program is the Marine Protection, Research, and Sanctuaries Act of 1972 (MPRSA), which authorizes the Corps of Engineers to issue permits for the transportation of dredged material to be dumped at selected disposal sites in the ocean. Under the CWA and MPRSA, the Corps selects its Section 404 and ocean disposal sites, and issues permits and authorizations for dredged material disposal, in accordance with guidelines and criteria developed by the Environmental Protection Agency (EPA).

Project development goes through several stages. Projects are initiated by a local demand for dredging. Thereafter, the Corps carries out reconnaissance and feasibility studies of the proposed project. At each step, there is an interplay between the Corps' district office and Corps' headquarters. With only a few exceptions, Congress authorizes each individual dredging project on a case-by-case basis, and appropriates funds for those projects on an annual basis until their completion. Congress also makes annual project-specific appropriations for the maintenance of existing channels and harbors.

The Corps' regulations prescribe that the dredging project should assure that the disposal of dredged material from the project occurs in the "least costly, environmentally acceptable manner, consistent with engineering requirements established for the project." The "least costly, environmentally acceptable" alternative is termed the "federal standard" and is the base plan from which project planning and budgeting is performed.

State Roles in Dredging and Dredged Material Management

Although the federal government has an important role in dredging, state and local governments also have important interests and responsibilities. Many of the benefits of dredging-waterbome trade and water recreation-flow to regional economies. In similar fashion, the environmental impacts of dredging and dredged material disposal are also largely borne by the communities living near the waterways.

The Coastal Zone Management Act of 1972 (CZMA) authorized the creation of state coastal management programs to comprehensively manage uses of resources in the coastal zone. The statute is implemented by state coastal management programs in partnership with the federal government. The CZMA program is administered by the Office of Ocean and Coastal Resource Management of the National Oceanic and Atmospheric Administration (NOAA), which has approved 32 state coastal management programs under the statute.

Section 307 of the CZMA requires that federal actions in or outside of the coastal zone that affect any coastal use or resource must be consistent with the enforceable policies of state coastal management programs "to the maximum extent practicable." Federal actions that must be consistent include federal agency activities, federal approval activities (such as federal permits for private actions), and federal financial assistance activities. Therefore, the CZMA consistency requirement effectively incorporates the enforceable policies of state coastal management programs into the environmental regulations with which the federal dredging plan must comply.

State governments have a second regulatory role in connection with federal dredged material disposal practices. Section 401 of the Clean Water Act of 1977 requires the Corps to seek a certification from the state water quality certifying agency that a proposed discharge of dredged material into any waters of the United States within state jurisdiction (including the territorial seas) would not violate applicable water quality requirements. The requirement to comply with applicable state water quality standards is also incorporated into the federal regulations governing the issuance of Section 404 permits and authorizations including the Section 404(b)(1) guidelines. The ocean dumping regulations also require compliance with applicable marine water quality criteria.

Dredging projects depend on a complex intergovernmental process that tries to balance economic costs and benefits while minimizing environmental harm. On a number of occasions in the past, the Corps and the states have found themselves in conflict over dredging projects. The Corps seeks to perform as much of its navigation responsibilities as it can with the funds appropriated by Congress for that purpose, and tends to regard additional environmental components of the dredging process as external to the navigation project itself. On the other hand, states and some federal agencies view the beneficial use of dredged material as an integral part of the navigation dredging project, and seek to maximize the direct and collateral benefits that may flow from a given dredging project. In many cases, those benefits carry an additional cost beyond the cost projected by the Corps for the completion of the project. The Corps sometimes responds that these additional features should be separately financed by the state, or should be cost-shared with the Corps under its beneficial-use authorities. Conflicts over financing lie at the root of many controversies about CZMA consistency requirements and the beneficial uses of dredged materials.

Part I: Recommendations from the Workshop

This report summarizes the presentations and recommendations developed at a workshop on dredged material management and state coastal management programs held in New Orleans, Louisiana, on January 20, 21, and 22, 1999. The workshop was jointly sponsored by the National Dredging Team, the Office of Ocean and Coastal Resource Management of the National Oceanic and Atmospheric Administration, and the Coastal States Organization. The National Dredging Team includes the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the Maritime Administration of the U.S. Department of Transportation, the U.S. Fish and Wildlife Service of the Department of Interior, two departments of the National Oceanic and Atmospheric Administration, the Office of Ocean and Coastal Resource Management, and the National Marine Fisheries Service.

The workshop was intended to bring together state and federal agency representatives to discuss the connections and frictions between federal dredged material management processes and coastal management program requirements. Approximately 120 people attended the workshop, and their affiliations reflected the varied governmental and quasi-governmental organizations that are involved in this area. The bulk of the participants came from the U.S. Army Corps of Engineers and state coastal management programs, with smaller contingents from the Environmental Protection Agency, the Maritime Administration of the Department of Transportation, NOAA, Office of Ocean and Coastal Resource Management, the Fish and Wildlife Service, and port authorities from around the country.

On the first day, speakers laid out the issues and provided a base of factual information on which the attendees might find common ground and better understand their differences. (Part 11 of this report is a digest of the speakers' remarks.) On the second day, workshop participants broke into five regional work groups to discuss issues of importance to their particular regions and to develop recommendations to improve the coordination of dredging projects. In the afternoon, the participants took a tour of a dredging operation at the Port of New Orleans. On the third and final day, the five work groups presented their conclusions and suggestions. A general plenary discussion closed the workshop on a very positive note.

The workshop discussions illustrated many of the current pressures on dredging and the maritime environment. There will be a continuing need for dredging, and there is a growing demand for a number of deeper shipping channels. At the same time, the federal and state funds that are available for dredging and for environmental enhancement and restoration are highly constrained and are likely to remain so. Finally, there is a growing public awareness of the value and importance of environmental protection in the coastal zone, which leads to the demand for more beneficial uses for dredged material. These narrowing constraints affect all of the agencies dealing with these issues.

Several strong themes sounded throughout the workshop. One theme was the perennial challenge of fairly spreading the costs of the navigation and environmental components of dredging operations among the federal government, state and local governments, and local sponsors. A second theme reflected the difficulties associated with a transition from a narrow focus on navigation to a broader focus on maximizing both the commercial and environmental benefits of the coastal zone. A third major theme concerned the need to stimulate cultural change within the affected federal and state agencies to respond effectively to these new demands.

Notwithstanding the real challenges ahead, the workshop participants collectively expressed the sentiment that progress is being made, and that more progress is possible. Presentations on the first day explained some notable success stories, such as wetlands restoration projects in San Francisco Bay, marshland creation in Galveston Bay, sediment reduction in Toledo Harbor, and public and private partnerships in Louisiana. Throughout the workshop, there were many signs of softening attitudes and an expressed willingness to try to avoid conflicts by involving all interest groups in early collaborative planning. Overall, there was a striking convergence of sentiments between the breakout groups, and only a few of their recommendations were strictly local or regional in character. For that reason, this report has organized the comments and recommendations according to certain common themes and categories,

rather than on a region- by-region basis. The overhead slides used during the presentations by the regional breakout groups are posted on the website of the National Academy of Public Administration (http://www.napawash.org).

This part of the report summarizes the leading suggestions and recommendations voiced by the workshop participants and the breakout groups. As one would expect, most of the suggestions were not unanimously supported, and some of the suggestions are at odds with other suggestions. These recommendations reflect the views of the workshop attendees and not the National Academy of Public Administration.

A. Use the Regulatory Process to Facilitate Beneficial Uses

Workshop participants discussed the meaning and validity of the Corps' "federal standard" throughout the plenary sessions and breakout groups. Some speakers, particularly from the Corps, felt a continuing need to use the federal standard to protect the Corps' navigation budget. Other speakers stated that they thought the Corps too often uses the federal standard to restrict projects that were environmentally appropriate. Despite a lack of consensus about whether the federal standard should be altered, many participants made suggestions that were intended to improve the outcomes within the existing regulatory framework.

- There was widespread sentiment that the federal standard should not be regarded as an inflexible prescription for dredged material management, but rather as part of a process for arriving at a preferred course of action. While based on legal requirements and technical and economic factors, the federal standard for each project is developed through an interactive process, and the final result is shaped by the considerations that emerge during the collaboration between state, federal, and nongovernmental groups.
- There is a productive middle ground between state and federal agencies' interests on many projects. To reach this middle ground, the Corps should recognize that the term "environmentally acceptable" requires consistency with the mandatory elements of a state's coastal management program unless prohibited by federal law. Similarly, states should recognize that some elements of state programs may be ambiguous, vague, or broad in application.
- State managers and other stakeholders sometimes do not understand how the Corps has concluded that a proposed action is "environmentally acceptable." Workshop participants suggested that the Corps should open the "black box" of its decisionmaking process by documenting its decision that a course of action is environmentally acceptable. If it can make its own thinking more transparent, the Corps can contribute to better understanding and a more robust public dialogue. Numerous participants urged the Corps to define what it means for a base plan to be "environmentally acceptable."
- The Corps' district offices are perceived to be inconsistent and often inflexible in their interpretation and application of the "federal standard." The Corps headquarters should issue guidance to clarify the flexibility inherent in the federal standard, thereby improving the application and consistency of the district offices' use of the federal standard.
- NOAA should issue guidance about what is required for a dredging project to be consistent with an enforceable state policy under the CZNIA.
- Achieving federal consistency with state coastal management policies depends on those policies being clear. NOAA and/or the individual states should identify the enforceable state policies applicable to dredging operations and the disposal and use of dredged materials so that the Corps and project sponsors will have a better understanding of applicable state requirements.
- The Corps should broaden its valuation analyses to incorporate the various environmental benefits of dredged materials. It was also suggested that the Corps' calculations should offset the cost of beneficial use projects by the value of not filling in existing confined disposal facilities. Although placing dredged material in an existing

confined disposal facility may be very inexpensive for the project at hand, the premature closure of confined disposal facilities will ultimately require the use of more expensive options for future projects.

- The Essential Fish Habitat initiative under the Magnuson-Stevens Act may have a significant impact on dredging and dredged-material management. Participants called on NOAA to provide guidance on this emerging conservation and restoration issue.
- The Great Lakes breakout group observed that the process for designating the federal standard has no process for ensuring consistency with the coastal management policies of the Great Lakes Commission, which is a binational body rather than a state coastal management plan.
- The West Coast and Pacific Islands breakout group noted that ERN3 Section 102 ocean discharge criteria were too restrictive in island environments where the upland disposal areas are very limited and where land disposal can be environmentally harmful.

B. Improve Intergovernmental Coordination and Project Planning

Some dredging problems that are expressed as "consistency" conflicts are really the result of planning and budgeting failures. There have been projects where the existing funding authority would have permitted the beneficial use of the dredged material, but there was insufficient planning and coordination to accomplish it. Workshop participants noted a variety of problem areas and made a number of suggestions about how to improve intergovernmental cooperation.

- The Corps planning process and the state consistency review process are mismatched in various ways that invite conflicts:
    - In many cases, state environmental programs are built around a permit approval process. Since federal dredging activities do not require a permit, it is often hard for the state agencies to focus constructively on the Corps' dredging plans.
    - Another process mismatch flows from a state's reticence to commit itself to a dredging project without full details and information about the project. States are more likely to influence a federal navigation project if the state is vocal and involved in the early stages of the project.
    - The Corps' regulations offer too little time for states to comment on a consistency determination. The 45-day review period is especially burdensome in states that have a decentralized coastal management program based on local participation in the decisionmaking process.
    - The Corps plans its dredging operations several years in advance, but state agencies are often only dimly aware of these future plans. The Corps should give relevant state agencies as much notice about these early plans as possible, in order to stimulate early state feedback on dredged material management issues. The Corps should also provide fact sheets and other general information on its budget and planning processes to state managers and other stakeholders.
- State coastal management programs need to identify the future needs and opportunities for dredging and beneficial uses. The Corps can more readily respond to a long- term plan than to requests that are expressed at the end of the planning process for a particular dredging project.
- State coastal management programs are not always in full policy alignment with other state agencies. This problem sometimes emerges late in the dredging planning process, and might be avoided by more communication among the state agencies.
- There are no shortcuts to intergovernmental cooperation and public participation. Effective participation and full communication require a sustained outreach program by all affected agencies.
- The dredging process works better when state and federal actors sit down regularly to discuss current and future activities. A structured relationship and regular meetings can provide a foundation for the development of informal working relationships among

decisionmakers. Local planning groups should be created to develop harbor or estuarywide dredged material management plans.

- The National Dredging Team should provide further guidance on the role and operation of the regional dredging teams. This guidance should address the roles of ports and environmental groups in the teams, and what role regional dredging teams should play in the development and approval of regional and local dredging plans.

C. Increase Funding for Beneficial Uses

In many, but not all, cases, it costs more to use dredged material in a beneficial manner than it does to dispose of it in other ways. Federal and state funds for beneficial uses are limited. Workshop participants discussed a variety of ways in which more money could be made available for beneficial uses.

- Increases in congressional appropriations for dredging and beneficial use will require private-sector support. Workshop attendees urged a larger and more vocal role for the Coastal States Organization, the American Association of Port Authorities, beach communities, commercial and sport fishing organizations, and environmental groups. A coalition approach is required to obtain sound funding for both the navigation and environmental aspects of dredging operations.
- The Corps, states, ports, and local governments should make better use of existing legislative authorities to fund beneficial-use projects. In particular, Section 204 of WRDA of 1986 can help pay for beneficial-use projects, but has been used less often than it might be.
- It is important to seek new sponsors for cost-shared projects. This includes reaching out to existing public and quasipublic organizations, and also reaching out to the private sector.
- In some cases, navigation improvement sponsors (e.g., ports, shippers) oppose beneficial-use projects out of fear that they will bear the costs of the environmental improvements. Proponents of beneficial use should work with navigation sponsors and identify ways to share the costs of environmental improvements across a broader spectrum of users.
- Even apart from the funding for beneficial uses, many participants felt that the base funding for federal and state programs involved with dredged material management is too low. This resource limitation undercuts those agencies' abilities to engage in early planning and cooperation.
- Federal and state participants felt that agencies need more flexibility to use the resources that they have. Narrowly targeted appropriations tie an agency's hands and should be avoided where possible.

D. Increase Scientific Knowledge and Public Awareness about Beneficial Uses

There is a continuing need for more scientific knowledge about the environmental consequences of dredging, dredged material disposal, and habitat creation and restoration efforts. Improved understanding of these issues would help regulatory agencies make better decisions and would inform managers and the public about beneficial uses and how to pay for them.

- There is a need to monitor some beneficial-use sites after their completion, particularly in the case of demonstration projects. However, the funding for the dredging project usually does not provide for subsequent monitoring activities. Federal and state managers should investigate how funding for this aspect of the project can be assured.
- Some participants urged the Corps to allow district engineers more latitude in funding planning studies related to dredged material and beneficial uses. State agencies and the

public often seek to know more about proposed plans, but the district engineer is limited in the amount of investigation that he or she can pursue.

- Proponents of the beneficial use of dredged material need to address public fears and indifference about dredged-material management. In some parts of the country, the public is largely unaware of many of the environmental benefits of beneficial-use projects.
- Efforts should be made to ensure that advances in the technology of dredging and dredged material placement are publicized.
- Dredging planners should try to market dredged material as a valuable resource. In some cases, the material has ready applications, but potential users are not aware of its availability

Part II: Workshop Proceedings

A. Opening Remarks: What's at Stake

William Travis, Executive Director of the San Francisco Bay Conservation and Development Commission, outlined several key themes that were discussed throughout the workshop. Travis explained that dredging is an excellent issue to illustrate the value of the Coastal Zone Management Act, which provides the essential framework for federal-state cooperation.

First, dredging presents a classic tension between economic development and environmental protection. The CZMA is a tool to reconcile those interests because it allows local coastal areas to balance environmental values and economic interests. Second, Travis noted that the federal government is the main dredging actor, whereas the major economic benefits and environmental impacts of dredging are local and regional. The CZNLk provides a framework for cooperation between the state and federal governments. In particular, the CZMA provides a measure of leverage for states in their relationship with the federal government. Third, dredging management often involves more than one state, and the CZMA has a mechanism for achieving interstate cooperation. Finally, the CZMA permits diverse approaches to coastal management, which is necessary and appropriate, because the issues and challenges involved in dredging vary greatly by state and region.

Travis concluded by noting a theme common to all regions: it costs more to "do dredging right" than to use the old methods of "dredge and dump." Despite the increased cost, Travis said that beneficial use of dredged material has long-term economic and environmental benefits. Our challenge is to make a persuasive case that the nation should make the current investment needed to realize these long-term benefits.

Tom Chase, Director of Environmental Affairs of the American Association of Port Authorities, predicted that dredging issues will increase in importance in the years tocome. First, the volume of commercial shipping is expected to double by the year 2010, according to projections by the U.S. Customs Service. Ships will get bigger, and deeper channels will be needed for those ships to reach harbors. Ports will continue to undergo redevelopment. In some cases, ports will expand, but in other cases, ports will be redeveloped to handle different types of cargo. Improvement and maintenance dredging will continue to occur. Chase also predicted that there would be no national port planning (i.e., there would be no explicit federal decision to invest in a few ports but not others), and that changes in the roles and vitality of the ports will be largely driven by market forces.

Chase then provided a list of his "top 10" considerations to the workshop participants:

10. Beneficial use features should be designed into projects, not added later.

9. Beneficial use is a feature of multi-objective projects and should be cost-shared accordingly.

8. Dredging managers should make greater use of existing funding authorities.

7. Workshop participants should avoid "what if" arguments, such as "what if the harbor maintenance tax were replaced by something else?"

6. It is important to find additional local cost sharing partners for beneficial use, as ports may not be appropriate partners for environmental aspects of project.

5. Congress is not funding the base navigation program at an adequate level, much less meeting new challenges. Dredging proponents need to identify strategies to raise appropriations for the federal share.

4. As public agencies, ports are uniquely positioned to build partnerships for acceptable navigation projects with beneficial use features. Coastal management isn't just a matter of regulation; it should also involve alliance building.

3. The Corps should educate its districts about the use of budget authorities to fund beneficial uses. The Corps should begin to advertise its cost-share authorities to potential sponsors.

2. State coastal programs should use their special area management tools to identify and streamline the permitting process for beneficial use sites. Project users-ports, user groups, and state and local goverriments-should take a more active role in planning projects.

1 . Have fun! That is the best way to build partnerships.

John Bums, Chief, Planning Management Branches, Corps of Engineers, gave an overview of the Corps of Engineers' Civil Works Program as it pertains to navigation and dredging. The civil works program receives annual funding of about $5 billion, including funds received for work for other federal agencies. Almost all of the congressional appropriations are funded on a project-by-project basis.

The Corps' navigation program maintains 12,000 miles of inland and intracoastal waterways. The Corps dredges 300 major seaports, and over 600 smaller harbors. Each year, the Corps dredges 250 million to 300 million cubic yards of dredged material at a cost of about $500 million. About 30 percent of this material is now used beneficially.

Bums emphasized that the Corps is playing a growing environmental restoration role. The Corps was formerly an engineering organization, but has evolved into a full-service engineering and environmental services organization. In fact, the Corps now manages about 18,000-square miles of project lands for environmental purposes.

B. State Coastal Management Programs and the Federal Dredged-Material Planning Process

Tony MacDonald, Executive Director of the Coastal States Organization, introduced the first panel of the day, consisting of Joe Wilson, David Kaiser, and Craig Vogt. In his comments, MacDonald noted that while ports are very important economic clients of dredging programs, state coastal management programs needed to take a broader view that encompasses the interests of smaller coastal communities, harbors, and fisheries. MacDonald also pointed out that this workshop was part of an ongoing process of discussion and dialogue. Nationally, the Coastal States Organization is engaged in a dialogue with the American Association of Port Authorities to develop a vision of sustainable maritime communities. Local governments are trying to develop synergies between navigation, monitoring, and coastal management to improve transportation and environmental values.

Joe Wilson, an aquatic biologist in the Dredging and Navigation Branch of the Corps of Engineers, reviewed the history of the Corps of Engineers' dredging regulations as they relate to the relationship with the states. In 1972, Congress enacted the three statutes that still govern the dredging arena: the Marine Protection, Restoration, and Sanctuaries Act, the Federal Water Pollution Control Act (later known as the Clean Water Act, or CWA), and the Coastal Zone Management Act. With the amendment of the CWA in 1977, the Corps was required to seek water-quality certifications from states. That change led to a period of increasing conflict between the Corps and the states. In 1988, the Corps issued a revised regulation that clarified the process by which the Corps would seek and obtain state approval under the CWA and

CZMA. That regulation, which defines the "federal standard," was intended to accommodate state needs while protecting the federal dredging budget. Wilson stated that since the passage of that regulation, the Corps and states have attempted to work out their differences on a project-by- project, state-by-state basis.

Wilson concluded with the observation that the Corps' budget has been flat or stable in real dollars for the last 20 years. Congress has consistently refused to provide additional funding for navigation projects, and Wilson was not optimistic that this would change for the better. Nevertheless, Wilson stated that workshop participants could use additional legislative authorities and a better understanding of the budget process to achieve additional beneficial-use goals.

David Kaiser, Federal Consistency Coordinator for the Office of Ocean and Coastal Resource Management, NOAA, explained that the workshop was conceived as an opportunity to focus on the tensions between the CZMA federal consistency requirements and the Corps' dredging operations. The CZMA requires that any federal agency activity that affects any coastal use or resource in the coastal zone must be carried out in a manner consistent to the maximum extent practicable with enforceable state policies. As a result, requirements of an NOAA- approved coastal management program are just as binding as other federal regulation that affects dredging practices. For this reason, enforceable state coastal management policies should be factored into the calculation for establishing the federal standard for each dredging project.

Kaiser emphasized that the Corps' dredging planners need to include the costs of complying with state requirements in federally funded dredging projects. The workshop is an opportunity to learn how to work together better and to coordinate earlier; how project sponsors can better use other legal authorities to achieve their objectives; and how and when states can build their requirements into a project's design and budget.

Craig Vogt, Deputy Director of EPA Office of Oceans and Coastal Protection, provided an historical overview of the development and work of the National Dredging Team (NDT). According to Vogt, then-Secretary of Transportation Frederico Pefia convened an interagency working group in October 1993 to study the difficulties in the existing dredging permitting process. This group issued a report in December 1994, that identified four major categories of problems:

1. There was too little communication between federal and state agencies.
2. There was not enough project planning.
3. Some problems were related to numerous scientific uncertainties.
4. The cost-sharing formulas were inconsistent or created difficulties.

The administration created the National and Regional Dredging Teams in response to the first problem. The role of the NDT is to allow top-level interaction between federal agencies, to prepare national guidance, and to promote national consistency of policies. the NDT is composed of the Corps of Engineers, the Environmental Protection Agency, the Office of Ocean and Coastal Resource Management and the National Marine Fisheries Service of NOAA, the U.S. Fish and Wildlife Service of the Department of Interior, and the Maritime Administration of the Department of Transportation. Regional Dredging Teams (RDTs) were conceived as a forum for resolving regional issues. Neither the NDT nor the RDTs were conceived as having a direct role in any dredged-material management planning or review Those issues were to be handled by Local Planning Groups (LPGs).

In June 1998, the NDT issued a guidance document entitled Local Planning Groups and Development of Dredged Material Management Plans (PDF, 260K). Vogt emphasized that this document was not prescriptive guidance, and that the structure, participation, and extent of work can vary to suit the local needs. Membership in the LPG can be very broad and can include such interests as federal agencies, state agencies, port representatives, recreational boaters' groups, environmental groups, and sport fishing organizations. The guidance describes an approach that is built around the Corps' planning

process. Cochaired by the Corps with states or ports, the LPG are to develop comprehensive dredged material management plans.

Discussion: The ensuing discussion emphasized the need for flexibility and creativity in the financing process. One speaker cautioned that one shouldn't expect either the ports or the Corps to pay for all of the beneficial-use projects. Several speakers urged participants to build partnerships to get increased funding and suggested exploring linkages with other funding sources, including HUD grants for waterfront redevelopment, brownfield grants to clean up port areas, and alliances between highway, rail, and dredging projects to capture funding under the Transportation for Equity Act for the 21st Century ("TEA 21").

Another thread of discussion concerned whether the country needed a national process for overall port planning. In particular, were there some dredging projects that simply shouldn't be done, because the cost was too high, or the benefits too low? On this point, the workshop yielded no general consensus. Some participants thought that national port planning was appropriate and necessary to make the most of limited resources, while others thought that it was politically and practically unrealistic. A third viewpoint held that even in the absence of an explicit national policy, there would be a national policy by default: Congress would eventually fund some major projects while others would not come to pass. Congressional funding will flow to those regions where broad multi-purpose coalitions are forged that simultaneously advance both the environmental and economic interests in the region.

Workshop participants also discussed whether the Corps of Engineers must apply for and receive permits from state coastal management programs before dredging a channel. David Kaiser explained that the CZMA requires the Corps to conform to enforceable state coastal management policies, but does not require the Corps to comply with state permitting procedures. However, other federal laws, such as the Clean Water Act, may contain a waiver of federal sovereign immunity and require the federal agency to follow state permit procedures. The CZMA does not have such an effect by itself. Joe Wilson stated that, as a matter of policy, the Corps does not apply for states permits absent clear congressional instruction to do so.

C. Case Studies in Dredged-Material Management Planning

John Carey, Chief Administrative Officer of the Alabama State Docks, introduced the second panel, which focused on two case studies in dredged material disposal. Carey noted that it was important to "think outside the box" in considering new ways to use dredged material. The Alabama State Docks had adopted a variety of new approaches, including selling dredged material to contractors as a raw material for asphalt, for use in base stabilization for road building, and to cap landfills. Public entities can also withdraw materials from disposal areas for beach nourishment projects and for the stabilization of public properties. Carey also described a disposal island project undertaken by the Alabama State Docks that has become a rookerie for endangered brown pelicans.

Wayne Warren, Chief of Land Management and Real Estate for the Ohio Department of Natural Resources, described recent efforts by Ohio to address dredging issues in the Toledo Harbor. Toledo is a major port on the Great Lakes that handled 14-million tons of diverse cargo in 1998. Eighty percent of the watershed is agricultural, which contributes to the high sediment loads in the river. By one estimate, the Maumee River carries about 1.3 million tons of suspended sediment into the harbor and channel each year.

In years past, the channel was dredged with sidecast dredging, but this resulted in shallow areas adjacent to the channel. Later, hopper dredges were used to haul sediment to the open lake, but this form of disposal became unpopular because open-lake disposal led to the re-suspension of contaminants. Lake Erie is used for drinking water by many shore-side communities. With the passage of the Clean Water Act, disposal of dredged material was limited to confined disposal facilities.

In 1992, the Water Resources Development Act provided for the establishment of a long-term dredged material management strategy for Toledo Harbor. This was a joint federal, state, and local effort. In early years, the planning process ran into conflict with the Corps' federal standard. After a lengthy and sometimes acrimonious process, the final report is nearing completion.

The plan identifies three key areas where work needs to be done:

> (1) Soil conservation measures are needed to lower the rate of sedimentation in the channels. The Natural Resources Conservation Service is leading the effort to implement modified and no-till farming practices throughout the watershed, and to expand buffer strips along waterways. A demonstration project has already resulted in a discernible reduction in sediment transfers. Activities in this area will continue.
>
> (2) The capacity of the confined disposal facilities should be conserved. The Toledo port authority has taken the lead in developing a recycling approach that mines clean material from confined disposal facilities and mixes it with sewage sludge to create topsoil.
>
> (3) It is important to plan for the future capacity of confined disposal facilities. Planners are exploring several options, such as raising dikes at existing disposal facilities to increase capacity, and constructing a new facility that would serve as a protective barrier for a sensitive wetland area.

Jeff Willis, Marine Resources Specialist from the Rhode Island Coastal Resources Management Council, described how the historical deadlock over dredging in Rhode Island is being resolved. In the last 25 years, there have been no major dredging projects in state waters because there were no designated-material disposal sites. Willis stated that there are 19 major federal navigation projects and numerous nonfederal projects in need of dredging. A 1979 report estimated that Rhode Island waters needed 2.6 million cubic yards of dredging, but only 123,000 cubic yards (5 percent) have been dredged since then.

In the early 1970s, the state closed existing disposal sites out of concern for their impact on fisheries. State efforts in 1979, 1987, and 1992 looked for solutions to the dredged material disposal, but did not bear fruit. Willis offered several explanations for the state's failure to identify feasible dredged- material disposal sites:

1. There was no systematic state planning for dredged-material disposal.
2. There was strong stakeholder opposition to in-water disposal.
3. A long list of agencies were responsible for dredging, with no state agency with a lead role.
4. Policy inconsistencies and conflicting regulations by state agencies eliminated much of Rhode Island Sound and Narragansett Bay as potential disposal sites.

In recent years, the deadlock has eased greatly, and the state Coastal Resources Management Council (CRMC) is nearing the final designation of dredged material disposal sites. Several factors were instrumental in breaking the deadlock:

1. User groups who would benefit from dredging, such as the pilots association and marine trades association, pushed hard in the political process.
2. The Corps refused to plan dredging projects without a state commitment to resolve the disposal issues.
3. The state legislature enacted the Marine Infrastructure Maintenance Act, which designated CRMC as the lead state agency to coordinate all state interests, develop a dredged material management plan, and identify in-water sites. The statute also directed that state water quality regulations should be no more strict than federal requirements.
4. The CRMC established a planning process that included both stakeholder groups and expert groups. In late 1996, the planning process reached a general agreement about potential sites and

uses, and the CRMC is close to a final designation of disposal sites. Willis said that the changed dynamics in the state had also improved the state agencies' relationships with both the Corps and EPA.

Part II: Workshop Proceedings continued

D. Louisiana's Use of the Coastal Wetlands Planning, Protection, and Restoration Act

Terry Howey, Administrator of the Louisiana Coastal Management Division, introduced the luncheon speaker, **Katherine G. Vaughn,** the Assistant Secretary of the Louisiana Department of Natural Resources. Vaughn focused her remarks on the Coastal Wetlands Planning, Protection, and Restoration Act of 1990 (called the Breaux Act in Louisiana, after Senator Breaux's sponsorship of the bill in the Senate).

Louisiana has 40 percent of the total salt marsh wetlands in the United States, and almost 80 percent of the wetlands that are lost in United States are lost in Louisiana. Vaughn called Louisiana's wetlands "a national economic treasure," because they support oil and gas extraction, waterborne commerce, and extensive commercial and recreational fishing industries. Beyond that, these wetlands provide vitally important ecological functions as habitat for fish, shellfish, and waterfowl. The wetlands also underpin cultural values important to the whole nation. Louisiana's coastal plain is home to 2 million people, supports a growing eco-tourism industry, and provides important buffers from hurricane and storm impacts along the Gulf coast.

These wetlands are being lost at an alarming rate. Without intervention, it is forecasted that Louisiana will lose between 25 and 35 square miles of wetlands each year, amounting to a projected loss of 527,000 acres by 2040. Numerous natural and human influenced factors are involved, including subsidence, sea level rise, shoreline erosion, salt water intrusion, lack of fresh water and sediment input from rivers, and altered hydrology.

Vaughn explained that Louisiana cannot afford to be uncreative or complacent in light of this serious threat. The Breaux Act gives Louisiana an important tool to respond tothe wetlands loss. Title III of the Act establishes a joint state-federal task force to plan, design, construct, maintain, and monitor vegetated wetlands restoration projects for the long-term conservation of wetlands and dependent fish and wildlife populations in coastal Louisiana. Using this framework, Louisiana has entered into partnership with the Corps of Engineers, EPA, the National Marine Fisheries Service, the National Resource Conservation Service, and the Fish and Wildlife Service.

Under the auspices of the Breaux Act, Louisiana state government, its federal partners, and local governments and stakeholder groups are engaged in a restoration planning process called Coast 2050. The project uses the coastal zone management structure to encourage local and private-sector involvement in an ecosystem planning initiative. In the fall of 1998, the first joint task force meeting resulted in an unanimous adoption of principles for coastal management.

Vaughn also discussed a number of wetlands restoration projects that were completed or under way, and described how each of the projects involved creative partnerships. One project was built by an oil and gas company as a mitigation measure for other projects in state waters. Four-fifths of the projects involved lands that were not under govemmental control. Since the Department of Natural Resources has no expropriation authority, voluntary private-sector participation was critical. Vaughn also emphasized that the program relied on as many different partners and legal authorities as possible. The projects were performed in cooperation with a diverse mix of federal agencies, including the National Marine Fisheries Service, the Corps, EPA, and the Fish and Wildlife Service. In Vaughn's view, every federal partner expands the state's capability to address its wetlands loss.

Vaughn closed with several points of advice. First, she urged all public organizations to adapt to working with the private sector; failure to do so will ensure the failure of one's programs. Second, she encouraged attendees to understand that wetlands restoration is actually in the interest of navigation, rather than a

collateral issue, since so much of the coastal infrastructure depends upon it. Finally, she encouraged ever-wider cooperation by all parties, explaining that cooperation acts like a starburst that sets off a chain reaction in other locations.

Discussion: A participant explained that the Breaux Act also includes two provisions that provide funds for wetlands restoration in states outside of Louisiana. Fifteen percent of the CW- PPRA funds are set aside for wetlands preservation in coastal states, and another 15 percent is available for wetlands restoration anywhere in the United States. The U.S. Fish and Wildlife Service administers these programs.

E. Understanding and Using the Federal Budget Process

Mike Carter, Director of the Office of Environmental Activities of the Department of Transportation's Maritime Administration, described the Marine Transportation System (MTS) initiative. In early 1998, the Secretary of the Department of Transportation initiated a dialogue between federal agencies and state and local interests on improving the federal coordination of the U.S. marine transportation system. The goal of the initiative is to identify the key maritime transportation issues in the next century. The Maritime Administration, Coast Guard, Corps of Engineers, NOAA, EPA, and other federal agencies held a major conference in November 1998. Private- and public-sector organizations were also represented at the meeting, including shippers, ship builders, environmental interest groups, and port authorities. The Maritime Administration is now convening a series of meetings in port cities across the country to continue and broaden this dialogue.

The November MTS conference touched on dredging issues in several ways:

1. Workshop participants felt that it was critical to deepen navigation channels to meet maritime industry needs.
2. It is important to shift from project-to-project permitting longer-term planning for dredging and disposal.
3. The process for developing the marine infrastructure needs to be reinvented based on principles of smart growth and watershed management.
4. The nation needs to integrate the different pieces that affect the marine transportation system and to link the marine transportation system to the rest of the country's transportation system.

To date, the MTS discussion has avoided specific funding issues such as replacement of the Harbor Maintenance Tax. These issues will arise and be discussed in the future. Carter pointed out that the MTS dialogue process may offer an opportunity to address some of the funding issues associated with dredging and dredged material disposal.

Pete Luisa, Branch Chief in the Program Management Division of the Corps of Engineers, described the Army Civil Works budget process. The budget and appropriations process stretches over a period of approximately 20 months. It starts in February, two years before the budget year (which Luisa abbreviated as "BY-2"), when the Office of Management and Budget (OMB) provides the Corps with an overall budget ceiling for the budget year. The Corps breaks that down by program, and the Corps' district offices set priorities and amounts for each of the projects in their area. By September of BY-2, the Corps submits its proposed budget to OMB, which then "passes back" the budget proposal with comments. In February BY-1, the administration proposes its budget for the next fiscal year. Congress takes that proposal, holds hearings, and proceeds to mark up the bill. If all goes well, an appropriations bill is enacted by October and the funds are then available for the budget year.

This budget schedule has special significance for dredging projects, because almost all dredging projects are funded by name with specific appropriations for each project. Luisa outlined four "zones of influence" during which state and local interests can affect the Corps' budget:

1. Since the budget plan starts in the field, states and potential sponsors should work closely with the district engineer to identify and characterize the dredging projects that are needed. The Corps field staff need to know the sponsors' views by February BY-2.
2. Sponsors also can visit Washington at the time of the headquarters' presentation to the Assistant Secretary of the Army for Civil Works (July to August BY-2), in order to urge inclusion of specific projects or specific funding levels in the Corps' proposed budget.
3. When the appropriations committees hold hearings on the administration's budget, committee members may be influenced by letters from constituents and the entreaties of individual members of Congress.
4. Luisa also explained that the appropriations committees themselves must live within the limitations imposed by their respective budget committees. Consequently, project proponents may want to talk to the budget committee to encourage adequate budgetary authority for dredging and navigation projects.

   Luisa warned that the Corps' operating and maintenance budget was under strong and continuing pressure. In order to adequately maintain existing navigation projects, and to maintain new construction projects that have been authorized by Congress, the Corps needs more funding. The balanced budget amendment, however, continues to reduce the appropriations available to the Corps. The consequence is an ever-increasing gap between needed funds and those that may be appropriated.

Rich Worthington, Senior Policy Advisor, Policy Division, Corps of Engineers, described five existing authorities under which the Corps can perform beneficial use projects in connection with dredging activities:

1. A beneficial use component can be included within the base plan of a navigation project. In this situation, the beneficial use aspect is incorporated into the federal standard, in that it is the least-cost alternative consistent with applicable environmental standards. Worthington noted that the Corps uses about 30 percent of dredged material beneficially, and the majority of this is done under navigation base plans. Even though the beneficial use is part of the federal standard, there can be a cost-sharing component. For maintenance dredging projects, the transportation and placement costs are borne wholly by the federal government. But projects involving the maintenance of disposal facilities are cost-shared, with the nonfederal party paying between 10 and 60 percent of the cost. In addition, the construction projects involving transportation and placement of dredged material may involve nonfederal costs of between 10 and 60 percent, depending on the depth of the channel. These types of cost-sharing do not depend on paying the incremental additional cost of beneficial use, but instead hinge on the fact that the underlying project is itself a cost-shared project.
2. Beneficial uses can also be included in specifically authorized projects. Congress sometimes authorizes and funds multi-use projects that involve beneficial use of dredged material. This involves doing a cost-shared feasibility study, working to get the authority and the appropriations, and forging a partnership for the nonfederal share of the project costs. In this type of project, the nonfederal share needs to cover 25 percent of the increase in incremental cost and 100 percent of the costs of nonfederal maintenance. Worthington stated that this was a "winning" approach because of the appeal of combining navigation and environmental goals. As examples of this approach, Worthington cited the Sonoma Baylands and Houston marsh creation projects, both of which were discussed later in this workshop.
3. Section 204 of the Water Resources and Development Act (WRDA) of 1992 provides programmatic authority for the protection, restoration, or creation of aquatic and related habitats. Since this is a programmatic authority, the Corps does not need to go to Congress for individual project appropriations. It is applicable both to maintenance and construction. Under Section 204, the nonfederal sponsors must pay 25 percent of incremental cost and 100 percent of nonfederal maintenance cost. The Corps is authorized to expend up to $15 million per year under this authority. Nevertheless, this authority has been underused in the past, and the Corps has received only $2 million to $3 million for this program in recent years. In fact, Congress

appropriated only $350,000 in FY 99 for this authority because so little was expended last year. Worthington encouraged workshop participants to consider how they could better use this authority.

4. Section 207 of WRDA 96 is similar to Section 204, but is not programmatic. Like Section 204, it can be used both for construction and maintenance projects, and it expressly allows projects that include a disposal method other than leastcost. This authority can be used to add a big environmental project to navigation projects, but requires specific appropriations by Congress.
5. Section 145 of WRDA 76 gives the Corps the authority to place suitable material on beaches, and can be used in conjunction with construction and maintenance dredging projects. The nonfederal sponsor must bear 50 percent of the incremental cost, and 100 percent of any nonfederal maintenance costs that are incurred. Worthington stated that this authority was not used as much as one might expect. Like Section 207, this provision requires specific project appropriations.
6. Section 1135 of WRDA 86 provides authority for the Corps to modify projects to improve environmental quality or address envirom-nental degradation caused in whole or part by the project. This authority and funding could be used for environmentally beneficial use of dredged material, but the Corps has chosen to use the more specific authorities of Section 204 as the primary vehicle to accomplish beneficial use projects.

Worthington closed by noting that the administration supports environmental goals. Congress has been a little cooler to environmental projects, but likes the combination of navigation and environmental objectives in dredging projects. Worthington sees an opportunity to develop more beneficial use projects in the future.

Tom Nuckols, Director of the Coastal Division of the Texas General Land Office, noted that the experience with the Houston ship channel project has significantly "raised the bar" for new construction projects in Texas. There is now a strong expectation that a new project will include a significant environmental restoration component, with the consequence that a least-cost project simply would not get off the ground today.

In the area of maintenance projects, Nuckols agreed that there is a good statutory framework for the Corps and states to meet dredging needs. But at a practical level, there are more conflicts.

First, funding is always a problem. More money would improve the situation, but even if there were more funding, there would still be some problems because navigational interests and environmental goals are not coordinated.

Second, Nuckols said that there are a variety of procedural hurdles to the Corps and states working together. In his view, the federal standard regulation creates an obstacle to the use of Section 204. The federal standard was designed to protect the Corps' operations and maintenance budget, and implicitly tells a district engineer to say no to any incremental cost. In essence, the federal standard says, "this money is for navigational purposes; if you want to do something that costs more than the base plan, don't expect it to come out of O&M."

Nuckols said that the Corps could give states wider latitude and still protect the O&M budget. Nuckols proposed that the Corps amend the federal standard to give district engineers more incentive to pursue projects under Section 204. He urged the Corps to open up the dialogue during the project planning process to reflect the additional legal authorities for sharing incremental cost. The state consistency process can be used as the way to make sure that alternative plans and alternative funding schemes are fully considered.

Discussion: Several participants noted that, aside from beach replenishment, the idea of beneficial uses of dredged material was not popular in the North Atlantic coastal states. This was possibly due to the absence of good projects that would have demonstrated the benefits from beneficial use. Other speakers noted that it was very important for user groups, such as Ducks Unlimited and the Sierra Club, to be

informed and involved in proposing these types of projects. It was also stated that it would be good if nonprofit organizations could become sponsors of the nonfederal share.

The workshop participants also discussed why the Section 204 authority has been underused. Some said that the trouble was in getting nonfederal sponsors to come forward. Others said that there were willing sponsors, but that the bureaucratic barriers were too high.

F. Case Studies of Beneficial-Use Projects

Jim McGrath, Environmental Manager of the Port of Oakland, introduced the last panel of the day, which described several beneficial-use projects. On the basis of his experience with the 1996 Oakland Harbor dredging project, McGrath stated that it is not easy to build beneficial use into projects, but that there are tools available that can be used for that purpose.

Steve Goldbeck, Program Director for Dredging and Legislative Affairs of the San Francisco Bay Conservation and Development Commission (BCDC), described a number of beneficial-use projects. The San Francisco Bay area dredges about 6 million cubic yards annually. Historically, dredged materials were disposed at an in-bay disposal site near Alcatraz Island. This site was supposed to be a dispersive site, but was not, with the consequence that a large mound of material was formed. Fishermen and the environmental community objected to further disposal at this site. In response, dredging activities stopped for a while.

In 1990, a number of interested parties joined forces to draft a long-term management strategy (LTMS) for the Bay. The partnership included the BCDC, the state water quality agency, the state water resource control board, the EPA, and the Corps of Engineers. The goals of the process were to

1. maintain the necessary navigation channels,
2. dredge those channels in an environmentally and economically sound manner,
3. maximize the reuse of dredged material, and
4. establish a cooperative-permitting framework.

The final environmental impact statement for the long-term management strategy is now nearing completion. The plan will involve a major shift in dredged material disposal. Less material will be deposited in the Bay, and more will be disposed of on upland sites and in the ocean. The long- term management strategy envisions that this transition will occur over a period of about 10 years. It will be important to get the alternative dredged material disposal sites online to achieve the long-range goal. This program will cost more than the past practice of in-bay disposal. The ocean disposal site has abundant capacity, but is approximately 50 miles offshore and is expensive to use. The potential upland disposal sites will also be more costly than in-bay disposal.

A major focus of the LTMS is using dredged material to improve habitat. Over 90 percent of the tidal wetlands in San Francisco Bay have been diked or partially filled and used for agriculture. The consequence has been pressure on endangered species and stresses on estuaries. The LTMS program will use dredged material in some significant restoration projects. Some material will also be used to rebuild levees in the delta. Goldbeck described four restoration projects that are under way or planned:

1. Sonoma Baylands tidal wetlands project. The California Coastal Conservancy purchased an 830-acre site of former tidal and seasonal wetlands for habitat restoration. The project uses a "design with nature" approach, in which subsided diked lands were built up with dredged materials. The dikes were then breached, resulting in new wetlands. The harbor-deepening project at the Port of Oakland was the source of most of the dredged material. The project is still evolving.
2. The Hamilton wetlands were part of a former Air Force base whose runway was to be restored to habitat. The Coastal Conservancy is developing a wetlands restoration project that involves

building levies, building internal peninsulas, placing a gradient of fill material on the site, and breaching the levees. The result will be tidal and seasonal wetlands that provide a series of habitats. This project design process included a large amount of public participation.

3. A private sponsor proposed the Montezuma wetlands project. This project will alter diked bay lands to restore its tidal action. The plan anticipates that 17 million cubic yards of material will be placed on the site. The sponsors plan to charge a tip to recoup the costs of construction. The Corps of Engineers is also exploring the feasibility of a Section 204 project to deliver dredged material to the site.
4. The Oakland Port Authority is pursuing a plan to restore shallow-water habitat in a portion of the harbor that was formerly used by the U.S. Navy. The port will take dredged material from a new terminal construction project and use it to fill an old deep-water Navy site to form a new shallow water site. The site will be stocked with eel grass and salt grass for habitat restoration, and will also be used for beach and recreation purposes. With the cost savings reaped by this project, the port is subsidizing the delivery of dredged material to the Hamilton wetlands project.

Greg Ducote, Louisiana Department of Natural Resources, described his state's emphasis on beneficial use of dredged material. In his view, beneficial use is more than just what to do with the material when the Corps is cleaning out these channels. Instead, it is the single best way to address the serious land loss that the state is experiencing. Ducote stated that the Corps has constructed over 7,000 acres of vegetative wetlands in Louisiana. While that is a real achievement, more needs to be done.

As a matter of policy, Ducote urged that the federal standard be amended to include the broader environmental benefits that may flow from beneficial uses of dredged material. Rebuilding Louisiana's wetlands is valuable because those wetlands protect all of the infrastructure south of Interstate 10. With respect to funding, Ducote said that it's a waste of resources not to rebuild marshes while rebuilding channels. States need to be partners with the Corps to get more money for beneficial-use projects.

Ducote said that communication between agencies is improving. The state entered into a memorandum of understanding with the Corps on a process for handling CZMA consistency determinations. This has had a good effect, as it lends predictability to the process. In addition, Louisiana and the Corps have begun a series of regular meetings to discuss how to develop projects using Sections 204 and 1135. Proactive efforts at communication are crucial to making progress. Ducote noted that the state wanted to have more communication with the dredging and shipping industries.

One of the keys to increased use of dredged material is the development of dredging technology. In Louisiana, the Corps dredges between 60 million and 90 million cubic yards each year. Not all of those dredging sites are immediately adjacent to places where sediment is needed. Ducote called for demonstration programs for improved technologies to move large amounts of sediment for longer distances than is currently possible.

The Louisiana legislature directed the coastal management division of the Department of Natural Resources to develop a long-term management strategy for dredged materials. Ducote said that the statute is fairly strict, and requires beneficial use of the material from every project where more than 500,000 cubic yards of material is dredged. The agency is now attempting to obtain approval for its long-term management strategy.

Phil Glass, a wildlife biologist at the U.S. Fish & Wildlife Service, described the extensive wetlands creation project under way in Galveston Bay. The original dredging plan for the Houston Ship Channel called for disposal in the bay This plan met with strong opposition by environmental groups, who complained about contaminated sediments and possible changes in the salinity of the bay The dispute was eventually referred to the Council on Environmental Quality. The dispute was eventually resolved with a commitment that the channel deepening project would include beneficial-use components.

With a new vision of the project, an interagency coordination team began to plan a more complex project with more environmental aspects. The project was framed within a 50-year time horizon, and explored all aspects of dredged-material disposal, including engineering considerations, hydrodynamics of the bay, the types and distribution of materials, and conflicts with pipeline structures. A beneficial uses group (BUG) was formed in 1990, and went out to all the users in the area. The BUG found wide support for the construction of marshes and bird islands and various recreational features, which were then integrated with the long-term plan.

The ultimate plan is to build 4,200 acres of marshlands in the bay. The project will start with some smaller-scale projects first. In 1994, the port of Houston built a 6,000 foot levee (for which it will be reimbursed from federal funds later). Adjacent areas were then filled with dredged material to create about 220 acres of marshland. The demonstration is now a verdant green, and Glass believes that it augurs well for the large-scale project.

Discussion: The discussion touched on issues involving the relative costs of creating wetlands and the need for testing of materials prior to placement in wetlands. Another issue concerned how to pay for the costs of wetlands monitoring after the material is placed at the site. Currently monitoring costs are borne completely by the nonfederal sponsor. Wetland restoration will inevitably involve substantial costs for monitoring physical conditions, water quality, and habitat, and the funding possibilities for those activities need to be further developed.

Appendices

Appendix A: List of Acronyms

AAPA	American Association of Ports Authorities
CDF	Confined disposal facilities
CMP	State coastal management program
CSO	Coastal States Organization
CWA	Clean Water Act
CWPPRA	Coastal Wetlands Planning, Protection, and Restoration Act of 1990
CZMA	Coastal Zone Management Act of 1972
DMMP	Dredged material management plan
EPA	U.S. Environmental Protection Agency
FWS	Fish and Wildlife Service, U.S. Department of the Interior
LPG	Local Planning Group
LTMS	Long-term Management Strategy
MARAD	Maritime Administration, U.S. Department of Transportation
MPRSA	Marine Protection, Research, and Sanctuaries Act of 1972
MTS	Marine Transportation System, an initiative of the Department of Transportation
NDT	National Dredging Team, a standing federal interagency work group
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service, NOAA, Department of Commerce
NOAA	National Oceanic and Atmospheric Administration, U.S. Department of Commerce
O&M	Operations and maintenance dredging activities; often contrasted to dredging associated with new construction projects
OCRM	Office of Ocean and Coastal Resource Management, NOAA
ODA	Ocean Dumping Act-a popular name for the MPRSA
RDT	Regional Dredging Team
RHA	Rivers and Harbors Act of 1899
USACE	U.S. Army Corps of Engineers
WRDA	Water Resources Development Act-authorizes bills for water projects; generally enacted every two years.

Appendix B: Sources of Further Information

U.S. Army Corps of Engineers

The Corps' civil works program offers extensive information about the regulatory and budgetary aspects of its national dredging program at http://www.usace.army.miVinet/functions/cw/cw-home.htm [Link no longer available, January 2004]. The Corps' Dredging Operations and Environmental Research program maintains a large volume of technical information about dredging, environmental impacts, and beneficial uses at http://www.wes.army.mil/el/dots/doer/. Detailed historical data on navigation and dredging projects can be downloaded from http://www.wrsc.usace.armymil/ndc [Link no longer available, January 2004].

Environmental Protection Agency

The Office of Water's Oceans and Coastal Protections Division has a website at http://www.epa.gov/OWOW/oceans/index.html. Information about the National Dredging Team and documents such as the local planning group guidance can be found at http://www.epa.gov/owow/oceans/ndt/.

Maritime Administration, Department of Transportation

The reports on the Marine Transportation Initiative are available at the MARAD website. http://www.marad.dot.gov/marad_mts.html

National Oceanic and Atmospheric Administration

NOAAs Office of Ocean and Coastal Resource Management offers information about federal consistency requirements under the CZMA and details on state coastal management programs at http://www.ocrm.nos.noaa.gov/czm/. The National Marine Fisheries Service homepage is located at http://www.nmfs.noaa.gov/, and includes links to information about implementation of the Magnuson Stevens Act.

American Association of Port Authorities

AAPA's website includes materials relevant to dredging and financing issues.

Coastal States Organization

CSO has a website at http://www.coastalstates.org/.

National Academy of Public Administration

This report will be available at the website of the National Academy of Public Administration under the link to the Center for the Economy and the Environment. That location also offers the text of the overhead presentations made by the five regional breakout groups on the last day of the workshop.

Appendix C: Workshop Agenda

A Workshop to Improve Coordination of Federal Dredging Activities and State Coastal Management Programs

January 20-22, 1999
Crowne Plaza Hotel, New Orleans
333 Poydras Street, New Orleans, Louisiana 70130
(800) 522-6963

Sponsored by the National Dredging Team, the Office Of Ocean and Coastal Resource Management and the Coastal States Organization

Workshop Objectives: To bring together state coastal management program (CMP), federal agency, and port representatives to learn about Coastal Zone Management Act (CZMA) and federal dredging requirements and processes, to improve coordination and cooperation, to avoid conflicts between state CMPs and federal agencies, and to develop effective and efficient procedures to review dredging and dredged-material disposal activities. Specific workshop objectives include the following:

- Identify next steps and actions to address dredging issues and state CMPs.
- Avoid state CMP-federal agency conflict late in the planning and approval of dredging activities.
- Explore ways that federal agencies can seek and state CMPs can provide early input into the federal agencies' dredging planning and budget process.
- Determine how to address state CMP enforceable policies in an effective and efficient manner.

Workshop participants will receive at the workshop a package of materials which will include several one-pagers on many of the issues. These one-pagers will help foster meaningful and focused discussions. The agenda is designed to limit presentations (presentations will be limited to 10-15 minutes each) to maximize discussion and participation. Issues and case studies not specifically included on the agenda may be raised during the discussions. The workshop is moderated by the National Academy of Public Administration (NAPA).

Day 1. Wednesday, January 20

8:15-8:30 Welcome (workshop Moderator, Rick Minard, NAPA) (purpose, objectives, agenda, format, materials)

8:30-9:30 Opening Remarks: What's at Stake. Speakers will discuss the economic and environmental importance and consequences of dredging activities, as well as an overview of other dredging issues, from their different perspectives.

State representative (William Travis, BCDC)

Corps representative (John Bums, Corps)

Port representative (Tom Chase, AAPA)

9:30 Discussion I - Coordinating the Federal Dredged Material Planning Process with State Coastal Management Programs

Objective: To provide information on CZMA requirements and dredged material management planning opportunities; to discuss how CZMA activities and dredged material management

planning can be coordinated to meet common economic and environmental objectives.

9:30-9:35 Moderator's Remarks (Rick Minard, NAPA)

9:35-10:15 Session Chair: Tony MacDonald, CSO

Interaction of Corps Navigation Programs, the Federal Standard and CZMA Requirements Joseph Wilson, Corps)

CZMA Requirements and Dredging-Recurring Issues (David Kaiser, OCRM)

National Dredging Team Guidance on Local Planning Groups and Development of Dredge Material Management Plans (Craig Vogt, EPA)

10:15-10:45 Open Discussion

10:45-11:00 Break

1:00-11:30 Case Studies in Dredge Material Management Planning; Successes and Problems:

Session Chair: John Carey (Alabama State Ports)

Toledo Harbor: Up-stream source control, watershed planning, and recycling dredge material (Wayne Warren, OH DNR)

Rhode Island: State led effort in local dredge planning and regulatory reform Oeff Willis, RI CRMC)

11:30-12:15 Open Discussion

12:15-1:30 Lunch, provided by workshop.

Speaker: Katherine Vaughan, Esq., Assistant Secretary for Natural Resources Department, Louisiana. The Coastal Wetlands Planning, Protection, and Restoration Act. Introduction: Terry Howey, LA CMP

1:30 Discussion 2-Federal and State Partnering Opportunities to Meet Dredging and CZMA and State Objectives

Objective: To demonstrate how the beneficial use of dredged material can result in efficient and effective dredged material placement to meet navigation goals while at the same time accomplish state CMP objectives. Provide practical information on how this can be accomplished (funding, planning framework, coordination, etc.). Address problems and impediments to achieving beneficial use.

1:30-1:40 Moderator's Remarks (Rick Minard, NAPA)

Session Chair: Mike Carter, MARAD

1:40-2:15 Understanding and using the Federal Budget Process (Pete Luisa, Corps)

Beneficial Use of Dredged Material-Available Corps Authorities, Programs, and Funding (Rich Worthington, Corps)

Meeting State CMP Dredging and Disposal Needs (Tom Nuckols, Texas CMP)

2:15-3:00 Open Discussion

3:00-3:15 Break

3:15-4:15 Case Studies in Beneficial Use; Successes and Problems:

Session Chair: Jim McGrath (Port of Oakland)

San Francisco Bay Development and Beneficial Use: Comprehensive planning and large-scale marsh restoration (Steve Goldbeck, BCDC)

Louisiana: Beneficial-use issues (Gregg DuCote, LA CMP)

Houston-Galveston Bay Marsh: Building stakeholder consensus (Phil Glass, USFWS)

4:15-5:00 Open Discussion

5:00-5:30 Closing observations for Day I and preparation for breakout discussions for Day 2 (Rick Minard, NAPA)

6:30-7:30 Reception

Day 2. Thursday, January 21

Discussion 3-Identifying Efficient and Effective Processes for State, Federal, and Project- Sponsor Coordination

Objective and charge to workgroups: To (1) identify issues, (2) determine whether an issue should be addressed at the local, regional, and/or national level, (3) whether there currently exists the means, authority, or control to address the issue, and (4) possible next steps and actions to resolve the issues.

8:15-8:30 Observations from day 1, setting up the breakout sessions, charge to group (Rick Minard, NAPA)

8:30-1:00 Regional Breakout Sessions: North Atlantic Region (Maine to Virginia); South Atlantic and Carribean Region (North Carolina to Florida East Coast); Gulf Region (Florida West Coast to Texas); Great Lakes Region; and West Coast and Pacific Islands Region. Each Regional meeting will have a facilitator and a recorder (each selected from meeting participants).

8:30-10:15 Regional breakout discussions

10:15-10:30 Break

10:30-12:00 Regional breakout discussions continue

12:00-1:00 Working lunch, provided by workshop. Each Regional Group will finish discussions and prepare report for Day 3.

Some issues to consider in the regional discussions:

- Implementing state CMP beneficial use policies when it is not the least cost alternative (Federal Standard)
- Consolidating regulatory and CZMA actions (CZMA consistency, 404, 401, MPRSA, etc,)
- Role of local, state, and federal laws, policies, and regulations in determining the base disposal plan (Federal Standard)
- Flexibility in establishing the base plan (Federal Standard)
- Role of watershed planning in addressing dredging issues
- Best way to deal with the existing budget process
- Funding future projects for beneficial use

- Others?

2:00-5:30 Field Trip/bus tour to Port of New Orleans

Day 3. Friday, January 22

8:30-9:30	Reports from regional breakout groups to entire group. (One spokesperson from each group lists the major issues and proposed actions. No discussion.) (Rick Minard, NAPA)
9:30-11:15	Open discussion of issues and development of action plan and nextsteps.
11:30-12:00	Short closing remarks by Corps (Rich Worthington), EPA (Craig Vogt), American Association of Port Authorities (Tom Chase), Coastal States Organization (Tony MacDonald), OCRM (David Kaiser), and NAPA (Rick Minard).
Workshop Ends	
1:30	Workshop Committee Meeting (CSO, OCRM, Corps, EPA, and NAPA)

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